

# EXHIBIT 42

## MAO DECLARATION ISO PLAINTIFFS' MOTION FOR CLASS CERTIFICATION

PUBLIC REDACTED VERSION

# Retention Controls Comprehension

[go/default-retention-findings2](#)

April 27, 2020

UXR: nzokael (POC)

UXD: dgearity

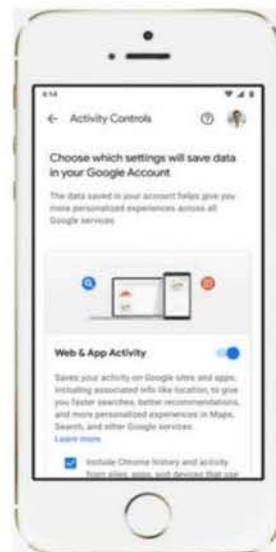
UXW: jwoll

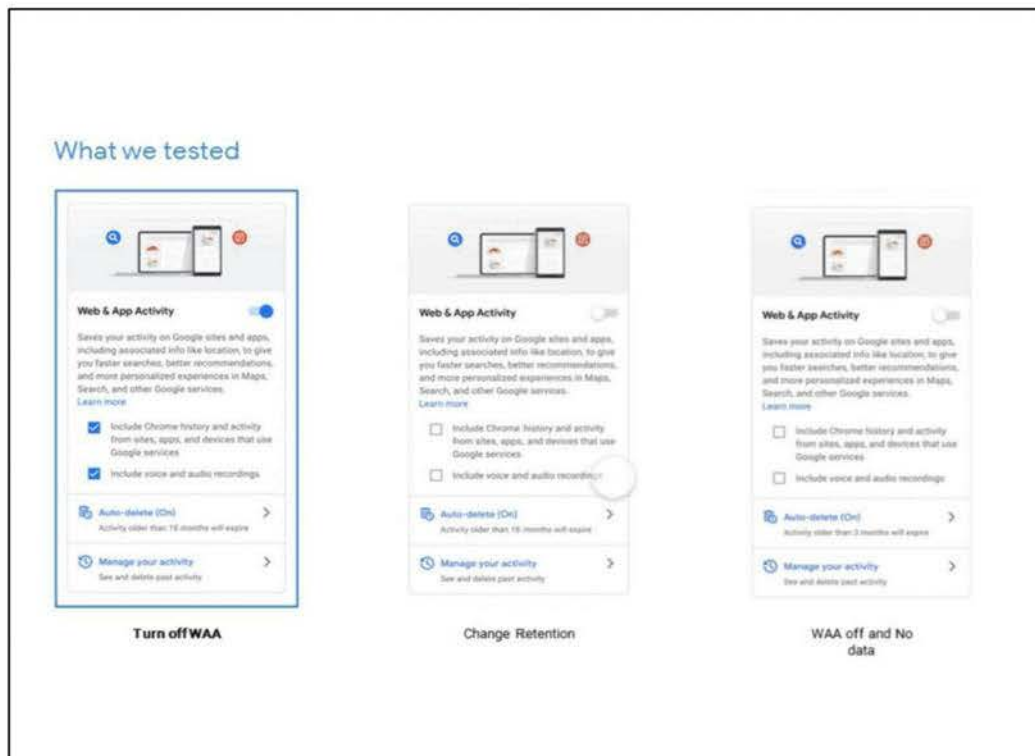
PM: davidmonsees, catwu

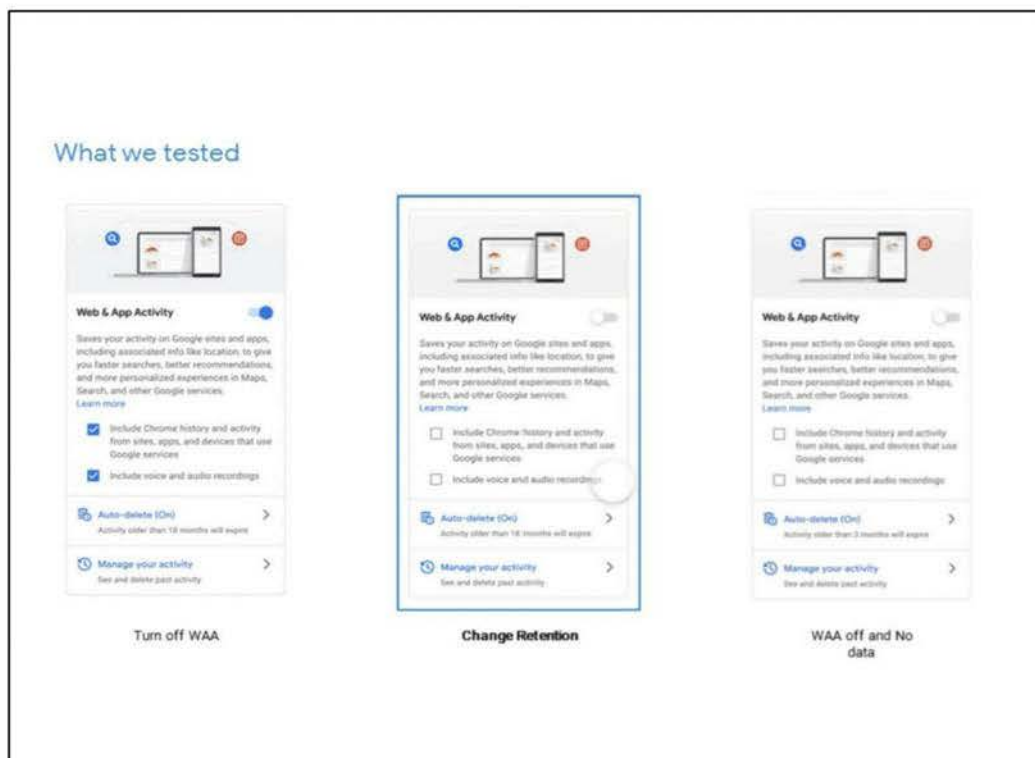
## Default Retention in Settings UI

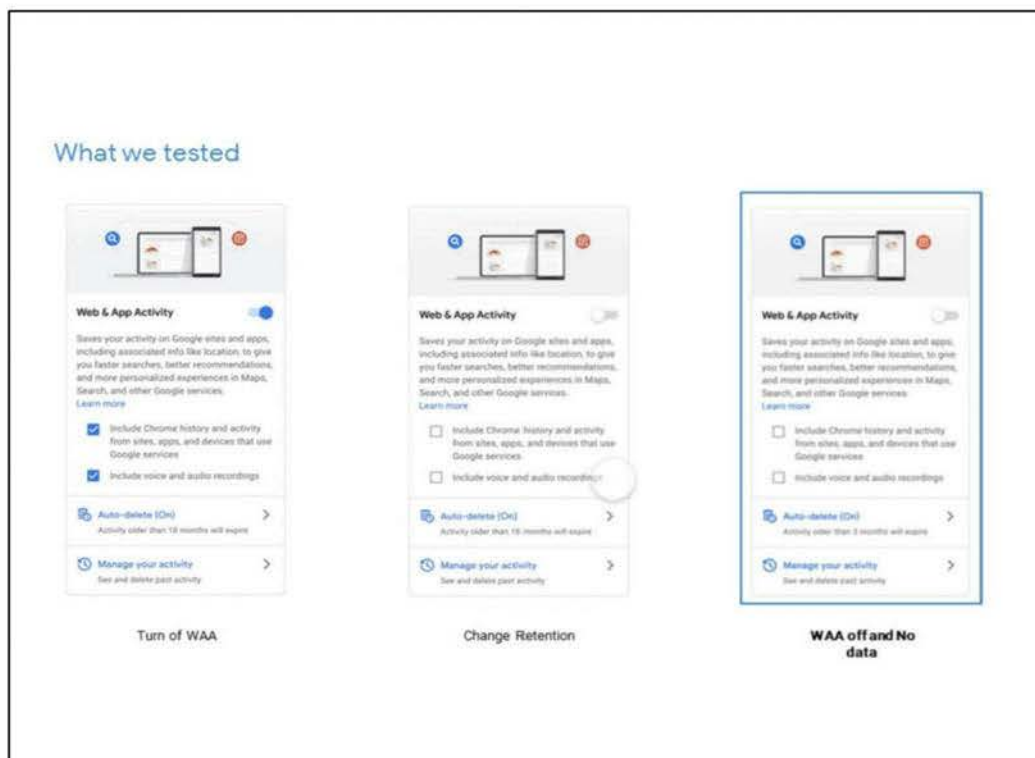
In past research we have seen that showing retention controls on the Activity Controls page makes user more aware of this function and gives them more sense of control over their data. ([Retention in Setting UI Research](#))

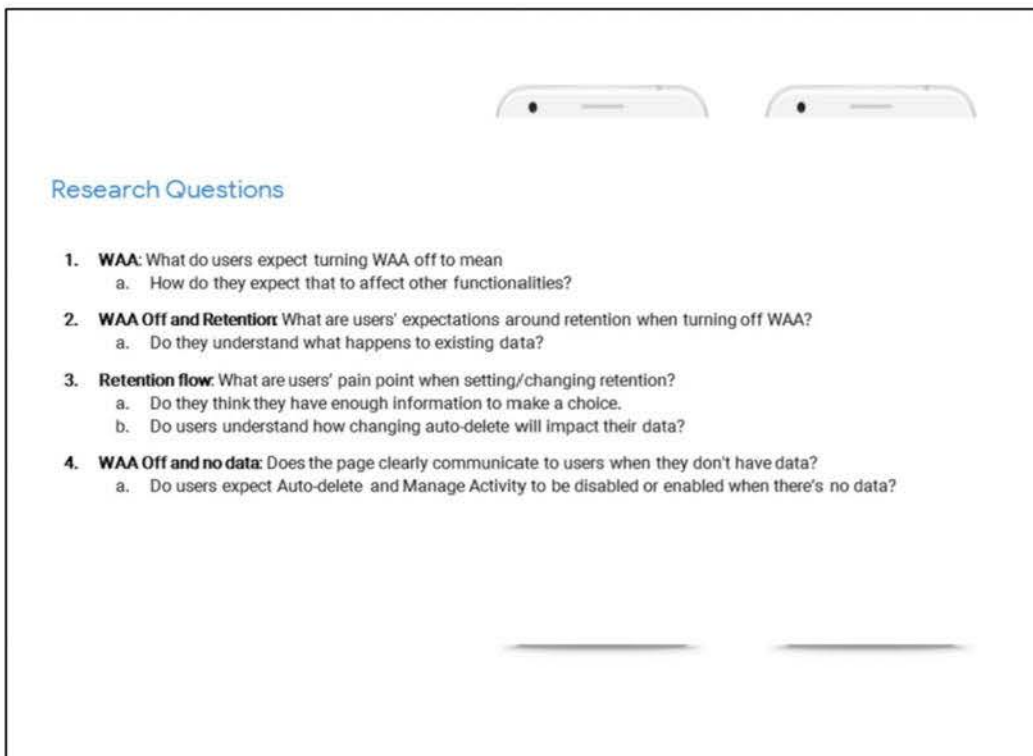
In this study we want to get an understanding of users' mental model of the control hierarchy and see if users have correct understanding of the relationship between the different controls on the page (collection on/off, DR on/off).

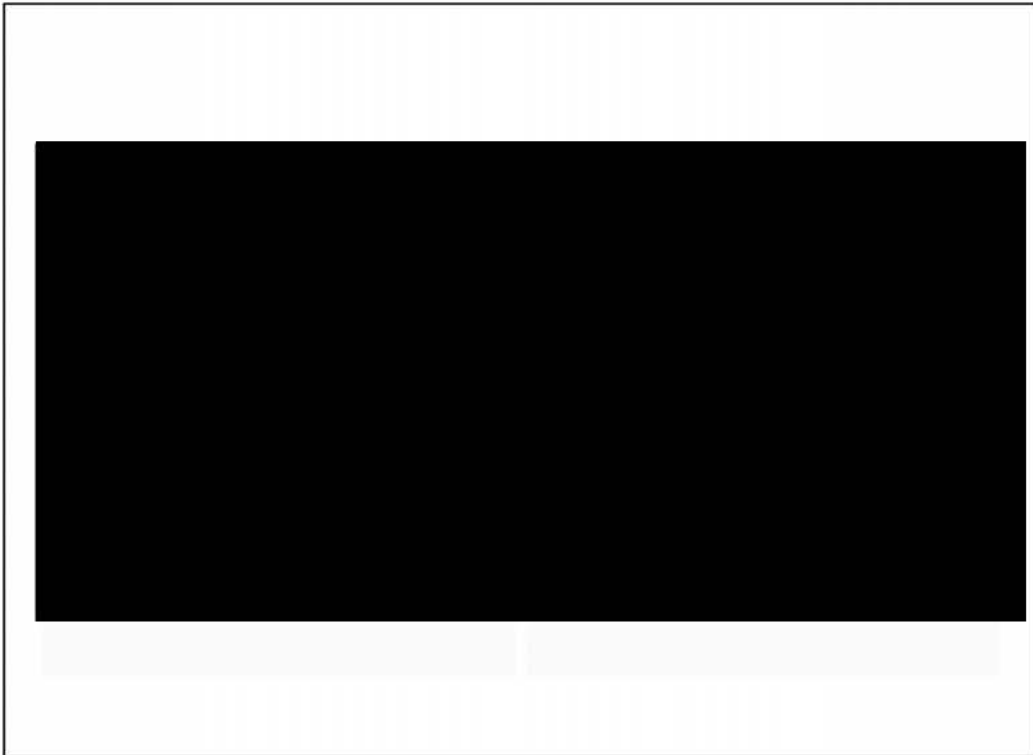














## Participants

PID	Gender	Age	Occupation	Device type	Tech knowledge	Does Google store data?
1	Male	51 to 60	Mental Health Counselor	Android	Very knowledgeable	Yes
2	Female	31 to 40	Teacher	iPhone	Somewhat knowledgeable	Yes
3	Female	24 to 30	Director of Academic Services	iPhone	Very knowledgeable	Yes
4	Male	31 to 40	Musician	iPhone	Somewhat knowledgeable	Yes
5	Female	51 to 60	Volunteer Management	Android	Somewhat knowledgeable	Yes
6	Male	31 to 40	Grad Student – Chinese Medicine	Android	Somewhat knowledgeable	Yes
7	Female	18 to 23	Customer service	Android	Very knowledgeable	Yes
8	Male	51 to 60	Manager Labor Analytics	iPhone	Somewhat knowledgeable	Yes
9	Female	31 to 40	Registered Nurse	Android	Very knowledgeable	No



## Findings Summary

### Overall Reaction to Activity Controls:

1. At first glance participants easily noticed the main functionalities available on the Activity Controls page
2. What type of data Web and App activity includes was a big question for many participants
3. Participants desired an easy way to access their activity controls and were not sure how they could do that today.

### Controls Comprehension:

1. **WAA Toggle Off:**
  - a. All participants expected turning WAA toggle off to stop saving their activity
  - b. Half of the participants expected Auto-delete and Manage activity to no longer be available when toggle is off
2. **WAA Off + AD:**
  - a. Overall some participants had difficulty understanding the relationship between WAA Off and the auto-delete function
3. **Auto-delete flow:**
  - a. Participants found the auto-delete flow to be clear and straightforward over all
  - b. Some questions regarding choices offered and what data was being auto-deleted did come up
4. **WAA Off + No Activity:**
  - a. Participant found Auto-delete enabled when they had no activity to be confusing and unintuitive
  - b. All participants preferred the auto-delete disabled design because it clearly communicated that they no longer had activity

Section 1

# Background Questions & Mock Reaction

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8/9 ppts believed Google stores activity data. However, none had a clear for how long

- Only 1 participant **did not think that Google stored information**, but was not surprised that they did:

*"I didn't know that but it makes sense. Anything that goes on the Internet will stay there so it make sense for Google to keep track of what I'm doing" - P7*

- Participants were **uncertain about how long** the data was stored for:

*"I think it depends on the type of information and what it's used for. Some of it is probably stored long-term and some of it shorter term" - P1*

*"I don't know. Maybe years? I wouldn't say it goes away in like five days but I also don't know how much space it takes to store up all of that information but a while" - P3*

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I'm pretty familiar with going to my account and deleting information I dont wat and turning things on and off. and I normally go about once a month and clear my history.

#### 4 participants mentioned wanting easy access to the activity controls page

- 2 of the participants mentioned this **when asked about desired controls**:

*"I would want easier access to my data. Right now I have to dig correctly and in the right places in the right ways to find it." - P1*

- The other 2 participants mentioned it **upon seeing the page** for the first time:

*"I wouldn't know where to find [the activity controls]. I'd love to see it offered when I create a new account or when I start using a service like Google Docs for the first time. And then later on in the settings." - P2*

*"I would definitely want to know how I could access the information that is stored about me. It's probably in one of the 100 bajillion options that Google has but it would be nice if it was easier to get to" - P5*

Source: 1 - Proprietary & Confidential

G

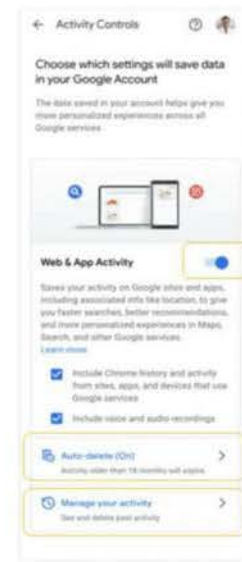
I'm pretty familiar with going to my account and deleting information I don't want and turning things on and off. and I normally go about once a month and clear my history.

When presented with the Activity Controls page, participants easily noticed the 3 main controls offered on the page

When exploring the page all participants mentioned on/off toggle, Auto-delete and Manage activity.

Some were even **pleasantly surprised to see the auto-delete function:**

*"I can even auto-delete my data. I really like that! It's interesting about the 'activity older than 18 months expiring'. It's goes contrary to the indefinite that I thought."*  
- P1



Source: Proprietary & Confidential


I'm pretty familiar with going to my account and deleting information I don't want and turning things on and off. and I normally go about once a month and clear my history.

However many participants were not clear on what Web and App activity was exactly referring to

Participants were uncertain about what type of data Web and App activity actually meant.

*"I would want more description about web and app activity means. I'm still hung up on what that word includes, it's not very descriptive in its current state"- P8*

This question came up in multiple instances including turning toggle off, and retention flow.



The screenshot shows the 'Activity Controls' screen in a mobile app. At the top, it says 'Choose which settings will save data in your Google Account' and 'The data saved in your account helps give you more personalized experiences across all Google services.' Below this is a section for 'Web & App Activity' with a toggle switch turned on. The text explains that this feature saves activity on Google apps and services to provide faster searches, better recommendations, and more personalized experiences. There are two checkboxes: 'Include Chrome history and activity from sites, apps, and devices that use Google services' (checked) and 'Include voice and audio recordings' (checked). At the bottom, there are links for 'Auto-delete (On)' (with a note 'Activity older than 18 months will expire') and 'Manage your activity' (with a note 'Get and delete past activity').

Google Privacy & Confidentiality

Users question around WAA came up in different stages. Picking and AD option, not knowing what is deleted, etc.

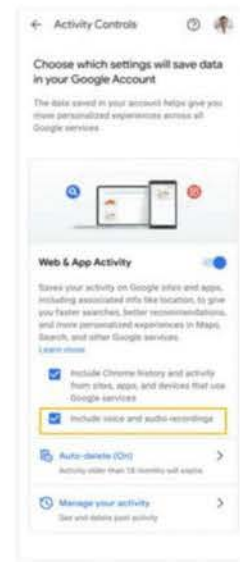
3 participants were surprised/concerned by seeing the inclusion of 'voice and audio recordings'

They also did not have a clear idea of what 'voice and audio recordings' meant..

*"The option to include voice and audio recordings... That's kind of scary because then I think is my microphone on all the time and Google is listening to the things I'm saying?" P9*

*"The inclusion of voice and audio is interesting. I guess now with all my online classes I should consider that they might be recorded." - P4*

*"I'd be concerned about the voice and audio recordings. If I have my computer on and open if something was going to be heard." - P5*



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I'm pretty familiar with going to my account and deleting information I don't want and turning things on and off. and I normally go about once a month and clear my history.



### Participants had some questions around Auto-delete

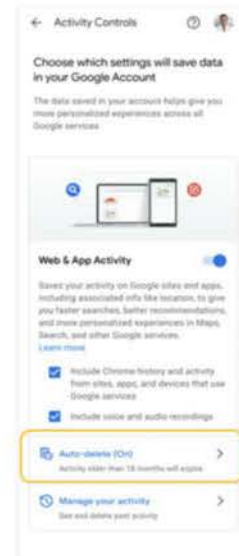
- Some participants did not connect Auto-delete setting to data retention:

*"I can't tell how long data is kept for. I guess permanently?" - P1*

- 3 participants were confused about what activity will 'expire' meant:

*"I don't know what expire means. I'd expect it to mean that it would no longer be used but I wouldn't assume that my data was going to be deleted." - P5*

*"What is the difference expire and deleted? I would hope that it would get deleted but using the word expire I don't know if that necessarily means it's going to be deleted or if it's just stored somewhere else." - P9*



Google - Proprietary & Confidential

I'm pretty familiar with going to my account and deleting information I don't want and turning things on and off. and I normally go about once a month and clear my history.

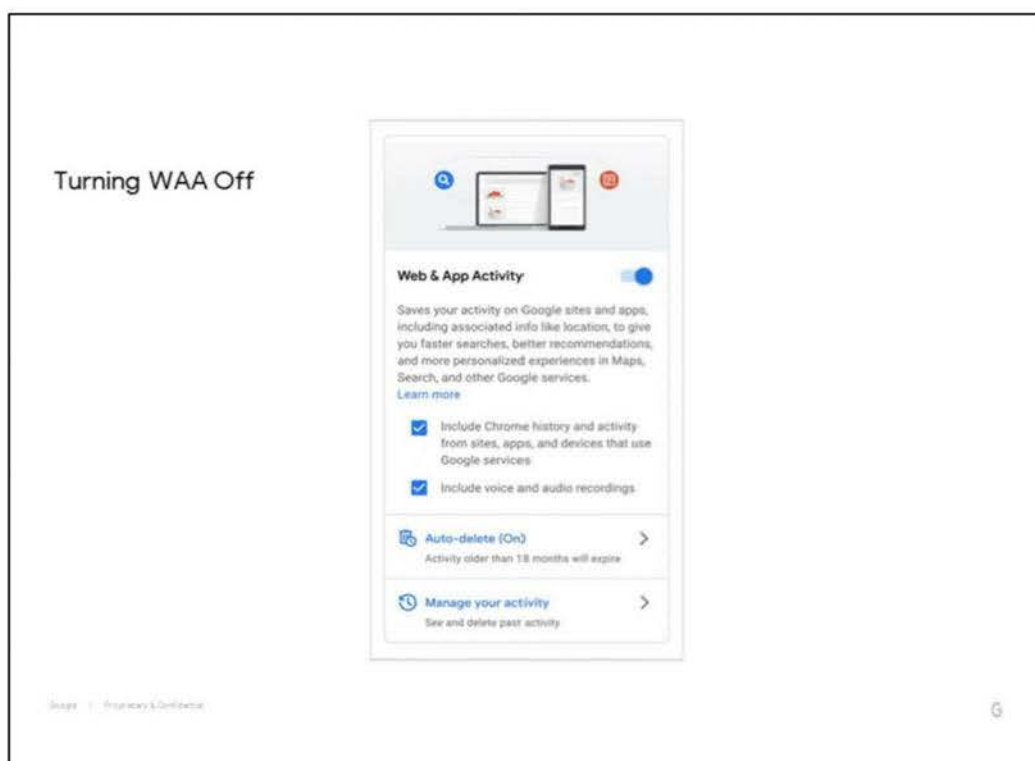
Id	Date	Text
1	04/27/2020 22:35:52	Good feedback, our new string explicitly says "Deleting activity older than 18 months" which hopefully addresses this
<div>Source: [redacted] (Proprietary &amp; Confidential)</div> <div>G</div>		

Section 2

## Controls Expectations & Comprehension

Source: [Thompson & Associates](#)

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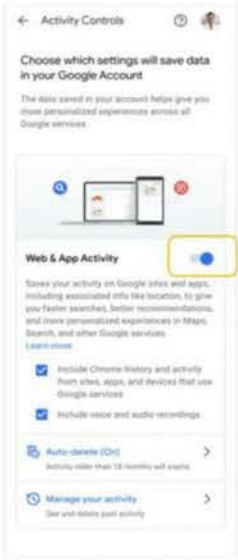
I'm pretty familiar with going to my account and deleting information I don't want and turning things on and off. and I normally go about once a month and clear my history.

Tuning WAA Off

All participants expected turning off toggle to stop their activity from being saved

"I would assume that whatever data was pumping out from like me using web browser **would no longer be recorded** assuming I actually trusted that Google won't save anything." - P4

"It will **stop giving google permission to store my activity**. It would kind of be similar to Incognito mode. It wouldn't be saving all that stuff so that I wouldn't get customized ads." - P1



The screenshot shows the 'Activity Controls' interface. At the top, it says 'Choose which settings will save data in your Google Account'. Below this, there's a section for 'Web & App Activity' with a toggle switch that is turned off (indicated by a blue circle with a white dot). The text below the toggle explains that turning it off will stop saving activity on Google sites and apps, including location, to provide faster searches and better recommendations. There are also links for 'Auto-delete (On)' and 'Manage your activity'.

Source: Transparency & Confidentiality

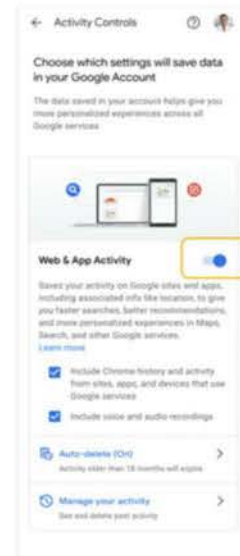
Tuning WAA Off

2 participants were doubtful that no activity would be collected at all

"I don't think it would save it. But **that doesn't mean that it doesn't collect the information** during the time of the use but that as soon as I'm finished or exit it deletes it" - P1

"I don't 100% trust that it wouldn't store anything. Not because I'm a distrustful person but **because there are conditions by which I should not be allowed to turn that off**. For example, activity that may be nefarious still has to be superseded because Google still has work hand in hand with government agencies that are providing oversight" - P5

Google - Proprietary & Confidential



WAA Turned Off

For 4 participants, the post tap screen accurately matched their expectation

	Pre-tap expectation:	Post-tap reaction:
P1	"I would expect the items in the same section, the 2 checkboxes, to turn off. The auto-delete is in the next table cell so I don't think that would change"	"Yes that's pretty much what I expected. Only the two checkboxes got unselected"
P4	"The two checkboxes underneath would gray out [Auto-delete and Manage activity] look like separate menus to me"	"I think it looks exactly as I thought it would"
P8	"I would expect that none of the activity would be saved and so the checkboxes will be gone. It's all or nothing"	"I think it looks exactly as I thought it would"
P9	"I won't be able to select the two checkboxes I don't think Auto-delete would go away because turning off the web and app activity doesn't necessarily delete your past data."	"That's what I thought would happen. So you still have the auto-delete and where you can see and delete your past activity. But anything moving forward wouldn't be stored."

Source: Proprietary & Confidential

would expect that. None of this activity would be saved and so it's not a an al a Carte menu, but it's it's all or nothing

WAA Turned Off

1 participant expected to see a confirmation dialog first

Pre-tap expectation:

PS *"I would expect to see 'are you sure? this data can help improve ...'. Because although it says 'give you faster searches...' what if I didn't read that? Then once I confirm it would show a little warning that says please understand that this is not complete privacy [...]"*

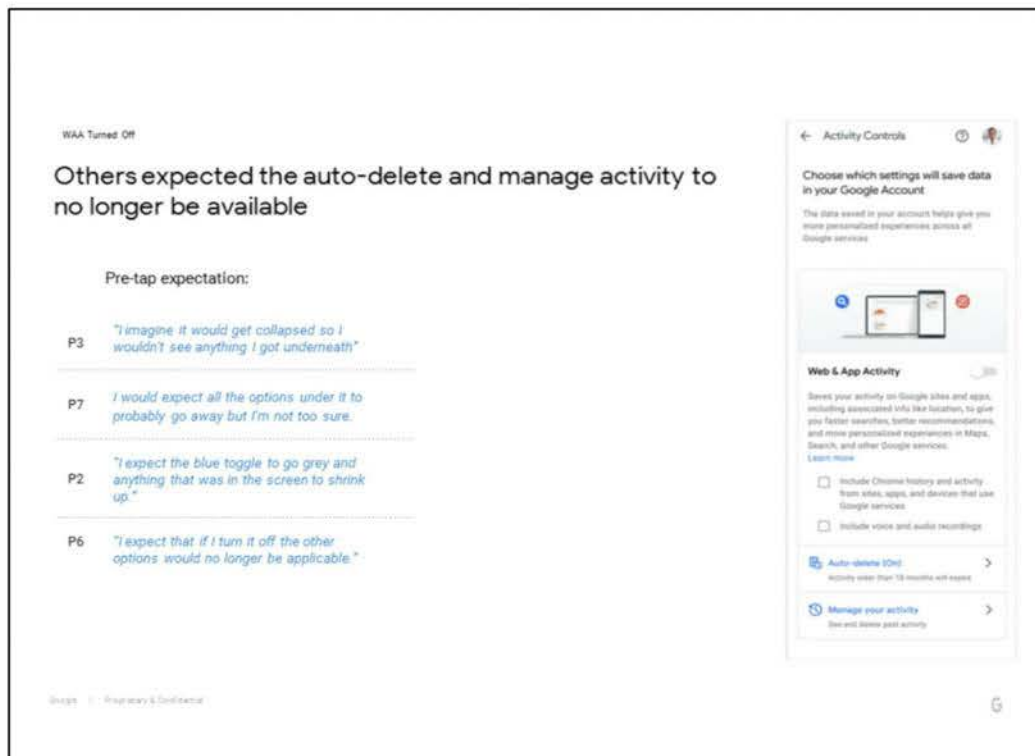
Post-tap reaction:

*"This is fine that those boxes went away, this still makes sense, but it would be nice to have it explain what has happened"*

Google - Proprietary & Confidential

would expect that. None of this activity would be saved and so it's not a an al a Carte menu, but it's it's all or nothing





WAA Turned Off

Upon tapping the toggle, 2 of the 4 participants understood why those controls would still be available

	Pre-tap expectation:	Post-tap reaction:
P3	"I imagine it would get collapsed so I wouldn't see anything I got underneath"	"I'm wondering why auto-delete and manage activity is still there? I'm assuming because it won't record activity moving forward, but you still have the option to go in and manage your activity up until that point"
P7	"I would expect all the options under it to probably go away but I'm not too sure."	"I can still Auto-delete and Manage activity. I guess that makes sense you can go see past activity"
P2	"I expect the blue toggle to go grey and anything that was in the screen to shrink up."	
P6	"I expect that if I turn it off the other options would no longer be applicable."	

Source: 1. Privacy & Confidentiality

WAA Turned Off

But the other 2 participants were still not sure how Auto-delete and Manage activity would be applicable

	Pre-tap expectation:	Post-tap reaction:
P3	"I imagine it would get collapsed so I wouldn't see anything I got underneath"	"I'm wondering why auto-delete and manage activity is still there? I'm assuming because it won't record activity moving forward but you still have the option to go in and manage your activity up until that point"
P7	"I would expect all the options under it to probably go away but I'm not too sure"	"I can still Auto-delete and Manage activity, I guess that makes sense you can go see past activity"
P2	"I expect the blue toggle to go grey and anything that was in the screen to shrink up."	"I would've imagined the other two wouldn't be an option anymore. Maybe it means I can personalize it. I can go and turn voice and audio on but not have others off?"
P6	"I expect that if I turn it off the other options would no longer be applicable."	"I'm not sure what I would be able to do with auto-delete if nothing is being saved. I feel like that should no longer be relevant."

Source: Transparency & Control Center

Google

Id	Date	Text
1	04/28/2020 16:15:34	Collapsing the checkboxes when WAA off is an interesting concept. I'm less inclined to hide the "auto-delete" and "manage" links because they provide key awareness for supplemental controls. My assumption would be (and this is based in some research) that knowing you can delete activity will makes users more comfortable with allowing collection to be on.
2	04/28/2020 17:01:04	wonder if we could do a better job communicating that the subsettings are disabled when WAA OFF +dgearity [REDACTED]
3	04/28/2020 17:01:04	+1 to only doing this for checkboxes. i like disabling auto-delete (prioritizing awareness) and having myActivity stay available (since we want to make it useful even in the no data staet)
<p>Source: [REDACTED] Proprietary &amp; Confidential</p> <p>6</p>		

WAA Turned Off

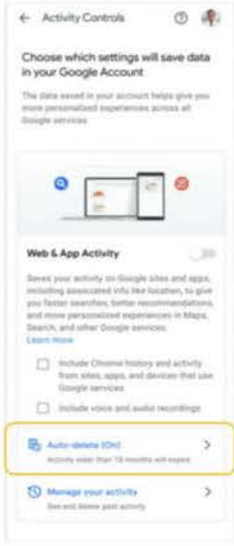
### Participants expected existing activity to remain in their account

- Some participants were clear on existing data being kept for 18 months and then deleted
 

*"So I just stop my activity from being saved moving forward. But I guess what was stored up until now will be there until it gets older than 18 months" - P9*
- Other expected past data to stay but did not mention 18 month retention
 

*"I would assume that Google would just hang on to it indefinitely for whatever purpose." - P1*
- 1 participant wasn't sure whether existing data would be deleted or not
 

*"There should be some type of disclaimer that says any prior information collected may be stored and if you want to view it or remove it there should be an option for that." - P6*



Google - Proprietary & Confidential

*I wouldn't necessarily think that it goes away completely unless there's another option that says delete past activity.*

Id	Date	Text
1	04/27/2020 23:10:49	This is after they have turned off toggle but have not changed AD
4	04/28/2020 17:00:23	is this when looking at the mock, eg when they se Auto-delete ON?
5	04/28/2020 17:00:23	got it - glad their expectations match reality :)
<div>Source: [redacted] Proprietary &amp; Confidential</div> <div>G</div>		

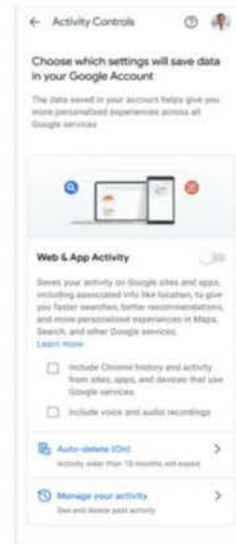
WAA Turned Off

Participants were able to eventually reach the correct understanding around the auto-delete setting and their existing data

After talking through the information on the page and their expectations with the Auto-delete control, participants seemed to have a grasp on what was happening to their existing data:

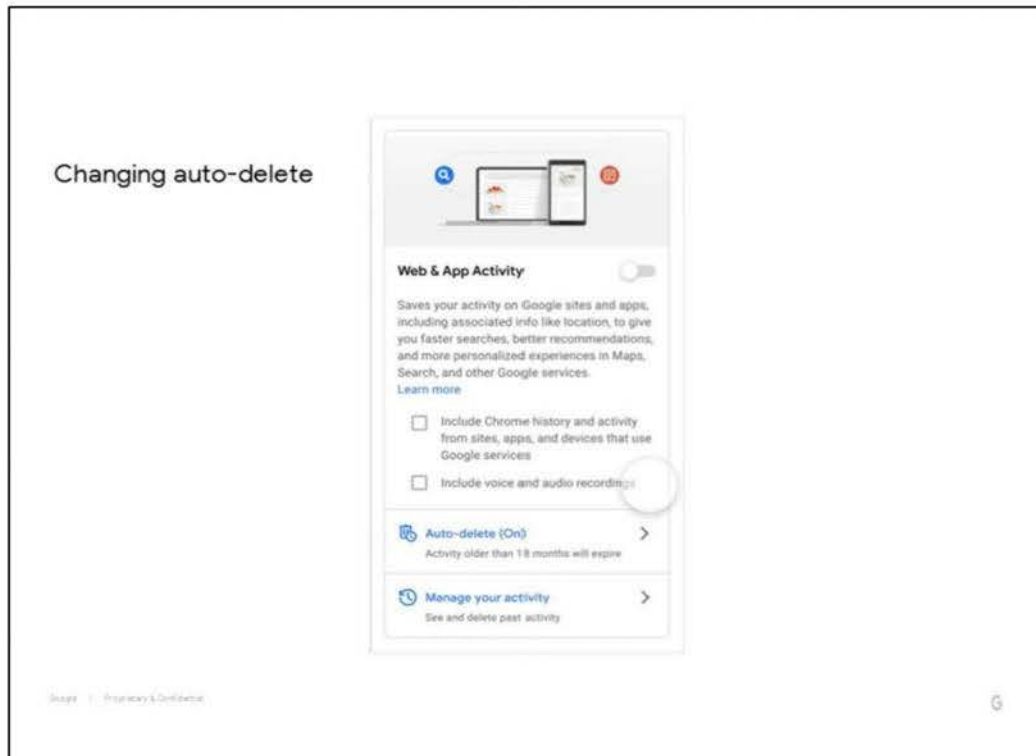
*"So if you disabled web activity today, but you have history recorded from yesterday and earlier auto-delete is still relevant. After all history deleted it's not going to record anything further. So then the auto-delete function is a moot point because it's not recording anything" - P3*

*"Because Auto-delete is on it means that there is still data from 18 months prior before I turned it off" - P5*



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so if you disabled your web activity like today, but you know from yesterday and like earlier you have history recorded that auto-delete is still relevant because if you had set it up to delete your history every week and it would do that and then after history deleted it's not going to record anything further. So then that you know how to delete function really is a moot point because it's not recording anything but at least it's there but to delete any previous activity. So Perhaps, it would be great out or it can say like you have no like history recorded or something like with that language. So they realize like you don't have any history which actually would be comforting to some people because if they saw that auto DeLeon and they know they're not selecting to have their history recorded then they might think that Google's lying. So maybe it should be grayed out or there should be some note saying like you don't have any history,



WAA Turned Off • Changing Autodelete

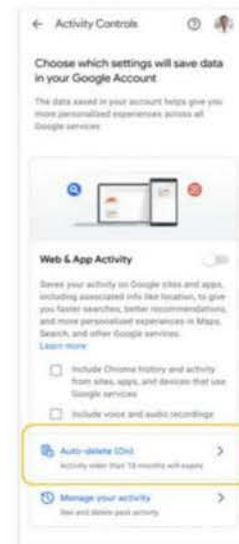
## Most participants expected to see additional time options when they tap on Auto-delete

*"I wonder if it would give me options for other times and I can select different times like 6 months or older or 12 months or older 18 months two years..." - P9*

*"If I clicked on that I would have the option to actually turn it off or maybe choose six months instead of 18 months." P2*

1 participant thought there would **only be an on/off option**:

*"There would probably be an interesting blurb that says this is what Auto-delete really does if you turn it off because it's turned on" - P5*



Source: 1 - Proprietary &amp; Confidential



WAA Turned Off • Changing Autodelete

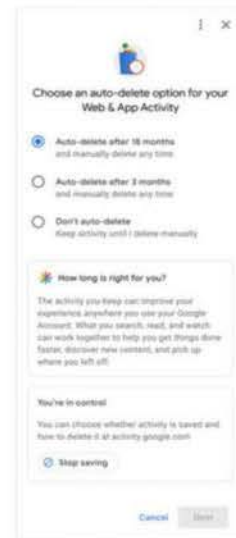
## Participants found the choice screen pretty straightforward

- Some participants expected to more options including 'Delete all':

*"I thought it would give me more options. There's a big gap between 3 months and 18 months, and manually deleting sounds very tedious. I would want to have an option that lets me delete all of the activity that's left" - P9*

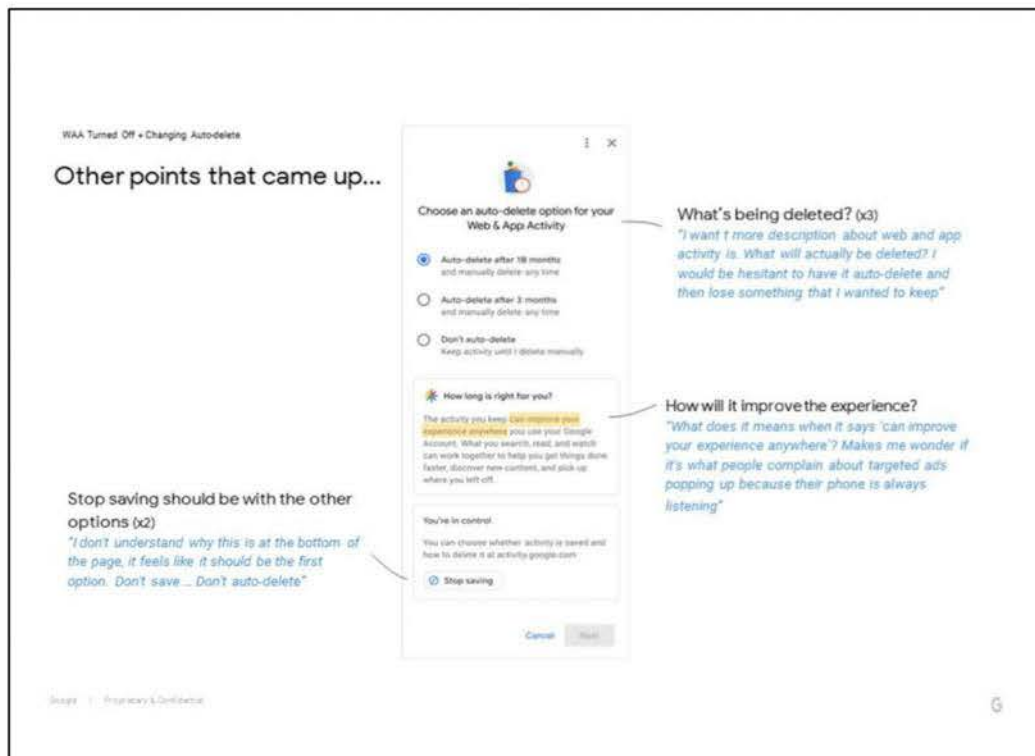
- But the participant who had only expected On/Off options was happy about the additional time options

*"I didn't expect so many options. I just thought that like the 18 months one would be the singular option." - P5*



Source: 1 - Proprietary &amp; Confidential





WAA Turned Off • Changing Autodelete

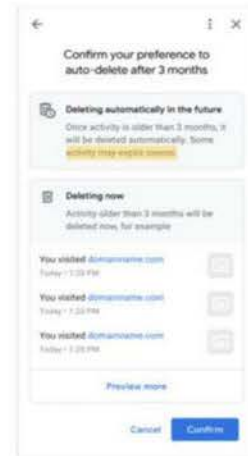
## Participants were clear on what the confirmation page was communicating

- The separate sections helped participants understand how data moving forward vs existing data would be affected

*"The top is talking about future state. It's deleting everything older than three months so tomorrow one day more would be deleted. And below it's a really nice feature that offers the preview. I would probably look to make sure nothing is being deleted that I don't want deleted" - P5*



- But 2 participants were **confused about why 'some activity may expire sooner'**

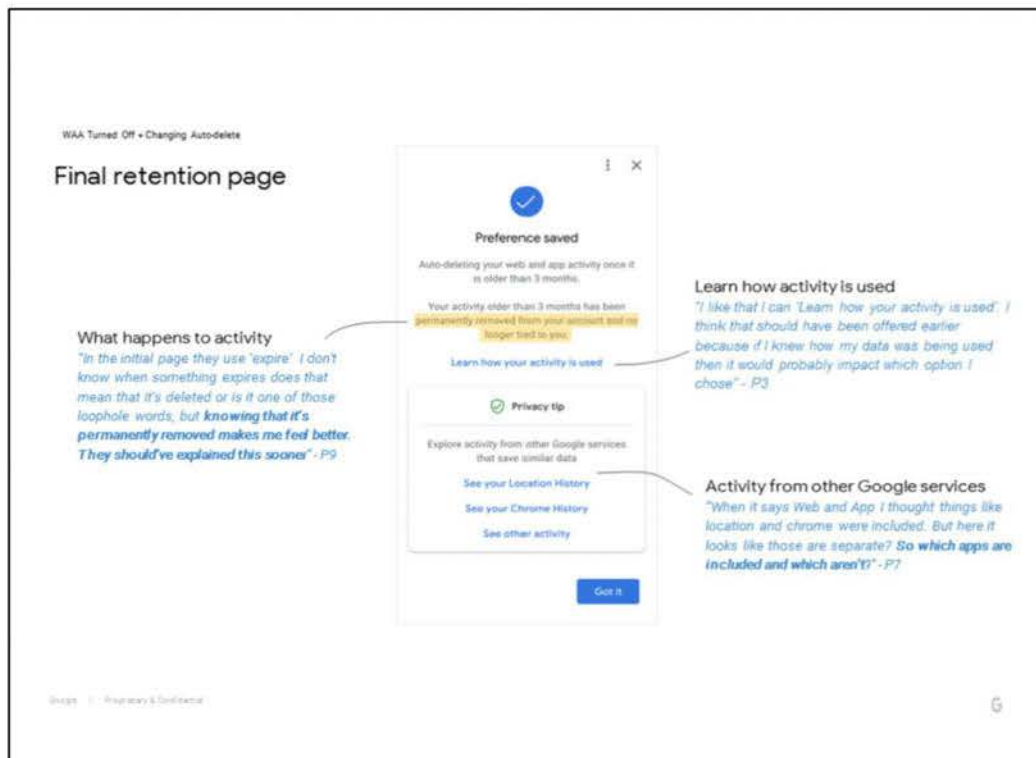
*"I would have a question about the 'some activity may expire sooner'. Not sure what it means by that. Why would it expire sooner than another activity if I've chosen three month" - P2*



Source: 1 - Privacy &amp; Confidentiality



Id	Date	Text
6	04/28/2020 16:59:52	+1 +jwoit [REDACTED] +davidmonsees [REDACTED] is this line necessary? what's the scenario we're accounting for?
1	04/28/2020 17:59:17	I agree about the ambiguity of "expire." Thanks Luis for pointing it out. Cat, I think this screen is intended to create extra friction for an irreversible user action with significant consequences.
7	04/28/2020 18:34:06	Sorry, I meant for the line with "may expire sooner" specifically! Could we remove it?
2	04/28/2020 20:22:40	Was this in there for VAA? As in, "...may be deleted earlier, once they are no longer needed ..." I think it was in there for data that is automatically deleted because it's TTL is shorter or because it is no longer needed. +davidmonsees [REDACTED] Could you confirm?
1	04/29/2020 20:45:14	+catwu [REDACTED] For you to think about. We use "expire" here again, and I agree that it's pretty confusing what that actually means
8	04/29/2020 20:45:14	we cleaned up the text to be clearer "may be deleted earlier, if it's no longer needed". thanks for flagging!
<div>  <span>Proprietary &amp; Confidential</span> </div> <div>  </div>		



Id	Date	Text
3	06/30/2021 15:32:00	another takeaway can be that maybe educational onward journeys can be surfaced before an action has been taken (ex. during the retention journey but before they have set retention)
2	07/12/2021 20:02:57	sabellezhou [REDACTED] Here is a similar insight around user confusion
1	07/12/2021 20:02:57	This is insightful - it also aligns with what was surfaced about user trust/education during the brainstorm session :)
<div>Source: [REDACTED] Proprietary &amp; Confidential</div> <div>6</div>		

WAA Turned Off + Auto-delete Changed

## When WAA was turned off and Auto-delete was changed to 3 months, some participants still had difficulty understanding what was happening to their activity

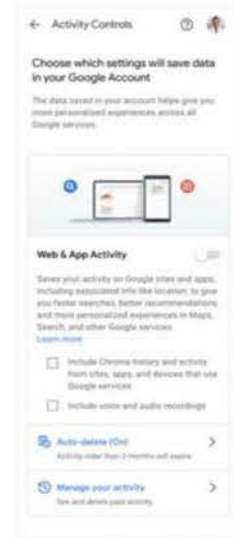
Some participants had difficulty distinguishing that the toggle impacts data collection moving forward whereas auto-delete can be working on existing data

*"Having toggled this off I'm under the impression that it's still saving my data but only for 18 months, or now 3. But that doesn't seem to be logical because it's turned off so my choice of going ahead and letting it go in 3 months should be turned off as well" - P8*

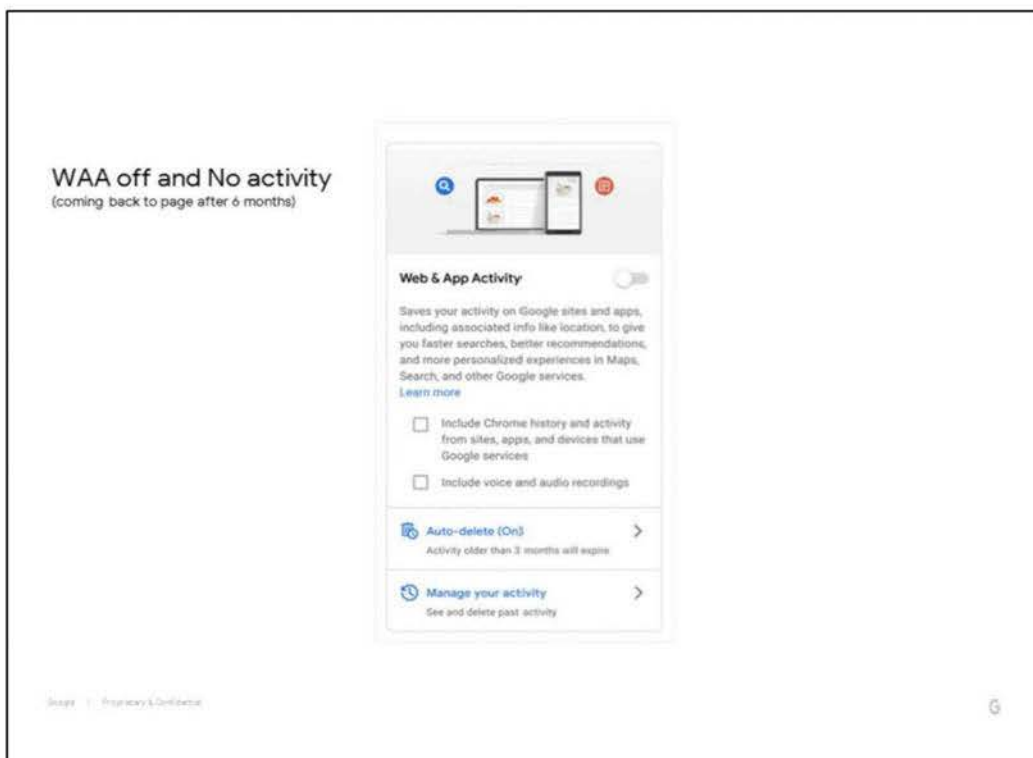
*"My activity is not being saved at all. Even though later I chose 3 months, the off toggle supersedes that. I'm not sure what the difference is between activity not being saved and this activity is going to expire not sure why I would have any activity because I've already turned it off" - P2*

*"The data I had that was more than three months old is now deleted and tomorrow, there'll be one more day that's deleted that. But the information isn't being saved anyway, why would the auto-delete be necessary? it's kind of like you do one or the other." - P5*

Source: 1 - Proprietary & Confidential







WAA Turned Off • No Activity

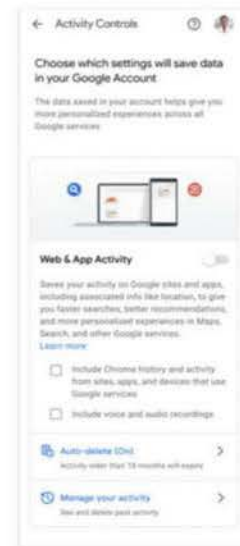
When asked about their expectation if they were to come back to this page in 6 months, 2 participants explicitly mentioned expecting no activity to be remaining

*"I would expect that when I tap on manage my activity that there would be less activity because it's being auto-delete. Well I guess in 6 month there shouldn't be any at all." - P3*

1 of the participants even expected **auto-delete to be disabled**

*"All of the history should be deleted and it's not recording anything further. So the delete function is a moot point. So Perhaps, Auto-delete would be greyed out or say 'no history recorded' which actually would be comforting because if users saw auto-delete still on they might think that Google's lying." - P9*

Source: 1. Privacy & Confidentiality



WAA Turned Off • No Activity

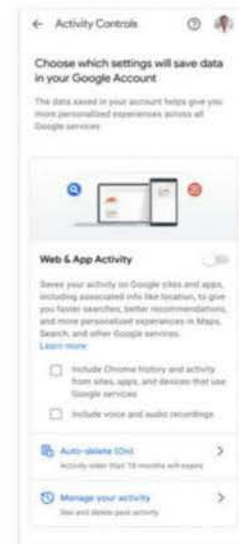
## 2 participants expected to be able to see the last date of setting configuration

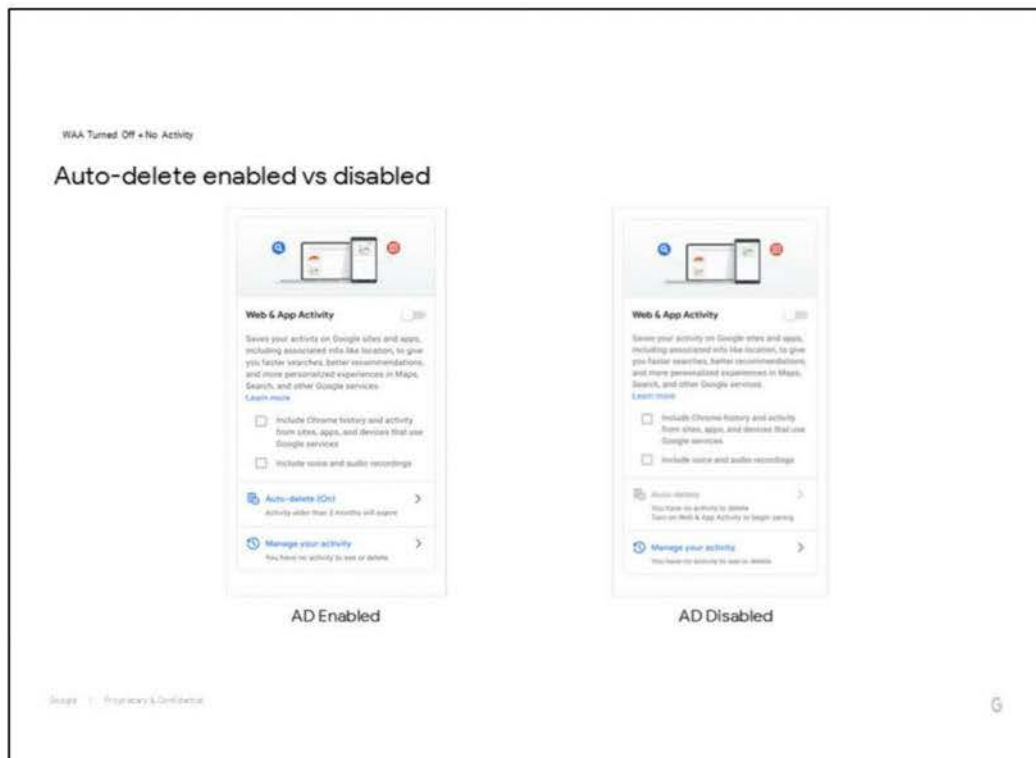
These participants wanted to know when they had last changed their settings so they could be able to know if they should have any data or not.

*"I would expect this page to say you turned this off 90 days ago or 60 days ago. So I can know how much data I should expect to have." - P8*

*"I would want to know when I changed that setting in case I forget. So if I was wondering why I couldn't see my history from April 24th I would remember that I turned it off on the 23rd." - P1*

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WAA Turned Off • No Activity


## The enabled auto-delete made some participants believe they still had activity data

Participants found 'Auto-delete On' when they have no data to be unintuitive:

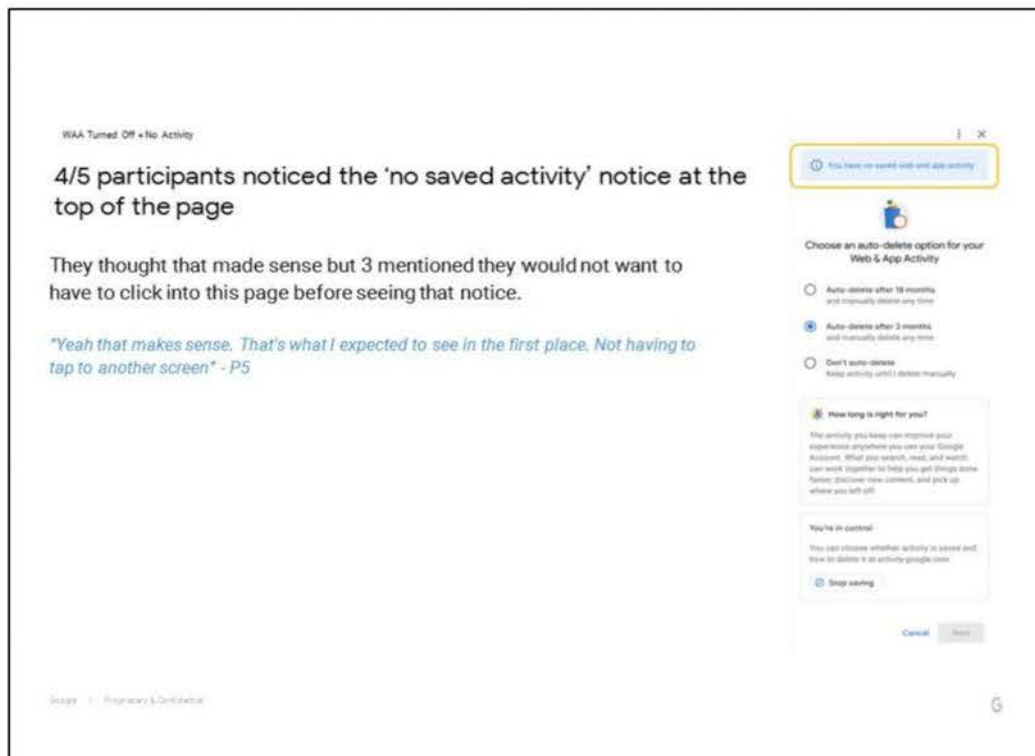
*"I noticed that auto-delete is blue, which means that I had stuff older than 3 months that I didn't delete."*

*"In this case auto-delete says in 3 months will expire. We are at the point where I should have any data left? I would be confused by the auto delete comment here"*

*"The Auto-delete part would still be contradicting that there is not more data if I was looking at it 6 months later."*



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WAA Turned Off • No Activity

**All participants preferred the disabled auto-delete design, because it was more informative of their activity state**

The disabled Auto-delete made it clear that there was no activity to delete

*"Having auto-delete disabled [makes more sense because if you come back 6 from now and you don't have any activity, it's unnecessary to have the auto-delete as an option. And you have to go to an extra page to be told you don't have data" - P5*

*"I have nothing to see or delete so why would I be able to tap on auto-delete? It make more sense for it to be greyed out" - P1*

*"[This screen] is better than what I expected because in retrospect if it still said activity older than 3 months was being deleted it would have been confusing" - P7*

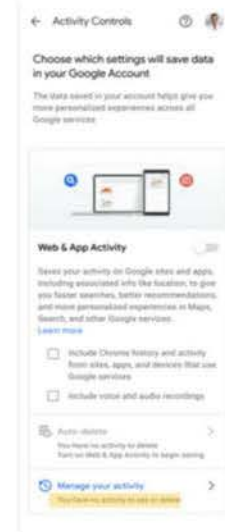
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The screenshot shows the 'Activity Controls' page in a mobile app. At the top, it says 'Choose which settings will save data in your Google Account'. Below this, there's a section for 'Web & App Activity' which is currently turned off. Underneath, there are checkboxes for 'Include Chrome history and activity from sites, apps, and devices that use Google services' and 'Include voice and audio recordings', both of which are also turned off. At the bottom, there are two buttons: 'Auto-delete' (which is disabled and highlighted with a yellow box) and 'Manage your activity'.

WAA Turned Off • No Activity

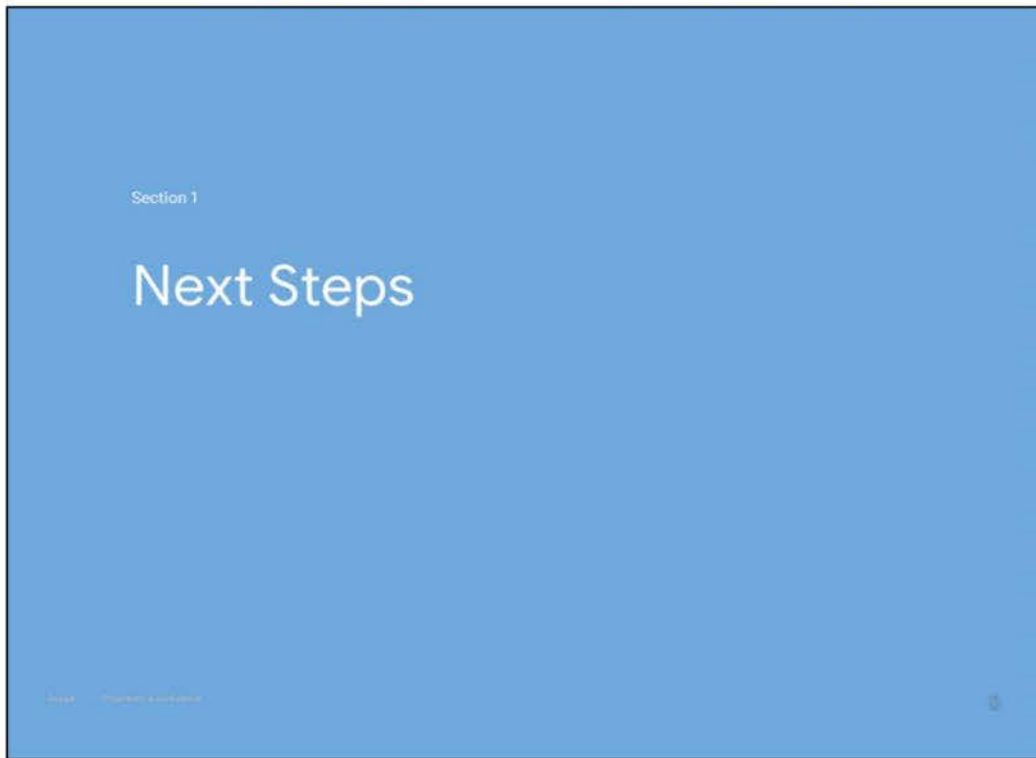
Only 1/9 ppt noticed the 'no activity' text in either design

- Almost none of the participants noticed the 'you have no activity to save or delete' subtext under Manage activity until it was pointed out to them.
- A few had indicated wanting to see that under Auto-delete

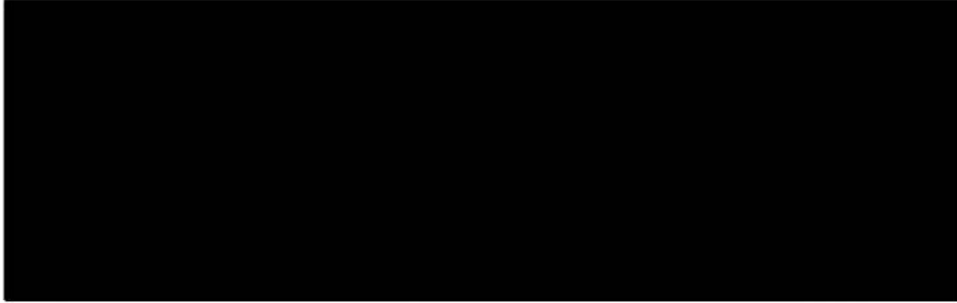


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## Recommendations and next steps



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